NOTE XIV.

ON THE NEW-GUINEA MAMMALS.

BY

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New-Guinea has been called by A. R. Wallace the greatest *terra incognita* that still remains for the naturalist to explore, and the only region where altogether new and unimagined forms of life may perhaps be found. This he wrote in 1869 and we now living in 1906 can, as a matter of fact, underline this sentence, for, notwithstanding the number of new forms has amazingly increased during the latest years of the 19th century, this largest of all islands remains still a *terra incognita*, as all the explorers have collected merely in a few localities here and there along the coasts, the interior of this enormous island remains a gigantic white patch on the map; we do not undervalue Dr. A. B. Meyer's crossing the island from the Geelvink-bay southwards, nor the english exploration of the Fly-river a. s. o., but a look at the map — and we still must confess that, relatively spoken, nearly nothing has been done to decrease the *terra incognita*. We are convinced however that the way to the interior of the large island is entangled with all kinds of difficulties, nay that it generally is not without peril of life to live some time on the coast, and we therefore appreciate every endeavor to explore that most interesting island. The explorations of the latest 25 years have enriched our knowledge of the New-Guinea Mammals really in an

unexpected way. Dr. O. Finsch (Neu-Guinea und seine Bewohner, 1865) enumerated a number of 15 mammals from New-Guinea: 2 bats, 10 marsupials, 1 pig, 1 cetacean, besides *Paradoxurus hermaphroditus*. Wallace wrote in 1869 (the Malay-Archipelago, Vol. II, p. 428): "the mammalia of New-Guinea and the adjacent islands yet discovered, are only seventeen in number; two of these are bats, one is a pig of a peculiar species (*Sus papuensis*), and the rest are all marsupials". A. Milne Edwards said in 1877 (Compt. rend. p. 1081): "l'ordre des Rongeurs est représenté à la Nouvelle Guinée par sept espèces". In 1878, von Rosenberg registered 20 mammals from N. G. (Der malayische Archipel, p. 549), meanwhile K. M. Heller could give a list of 70 mammals inhabiting New-Guinea, Yule-island, Mysore and Jobie (Abhandl. Dresden Museum, 1896/97, Bd. VI, No. 8). Dr. H. D. Tjeenk Willink (De Zoogdieren voorkomende in Nederlandsch Indie, 1906) enumerated 62 mammals, mostly from Dutch New-Guinea. I could point out that up to this year (1906) nearly the double number has been described! In order to clean the path to future investigators, I have undertaken the difficult task to study all what hitherto has been written concerning the mammals of New-Guinea, so that I exhibit in the following pages a rather complete list of them, together with short descriptions if convenient, with measurements where I judge it necessary, and mostly with a compilation of where a species has been described, with author, locality a. s. o. To my great surprise I found that there have been described from New-Guinea about 40 Bats, about 40 Mice, about 50 Marsupials and Monotremes and 2 Pigs: in all 126 mammals! I think this may be called a rather respectable number, the more as New-Guinea always passes for *very poor* in mammals! In my view it is somewhat premature to speak of "poor" or "abundant" unless having any notion of what is living on the mountains and in the interior of an island greater than Borneo, of the double size of Great Britain! The unexpected mammalian fauna

found in the mountainous interior of the Philippines, may be a warning against useless and premature judgements and conclusions!

CHIROPTERA.

1. *Eunycteris papuana* Peters et Doria.

Described (Ann. del Mus. Civ. di Stor. Nat. di Genova, 1880, Vol. XVI, p. 690) by Peters and Doria as a variety of *Pteropus melanopogon* and based upon an adult female collected by Beccari at Mansinam. In the Catalogue of Monkeys, Lemurs and Fruit-eating Bats, 1870, Gray created the new genus *Eunycteris*, with a single species *phaiops* = *melanopogon*. Matschie (Die *Megachiroptera* des Berliner Museums, 1899, p. 11) introduced Gray's genus as a subgenus, with i. a. the *papuana*-variety as a species, from the following localities: Gebeh, Mansinam, Andai (N. W. N. G.), Loloki and Constantinhafen (N. E. N. G.). In the Leyden Museum is a specimen from Port Moresby (S. E. N. G.). As Gebeh is an island between Halmaheira and Waaigeou, Andai a locality near Doreh on the Doreh-bay, Mansinam on the Groote (Great) Geelvink-baai, we conclude that *Eunycteris papuana* presently is known over an enormous area, viz. from Gebeh along the northern, north-eastern and south-eastern coast of N. G. to Port Moresby.

2. *Pteropus chrysauchen* Peters.

This species is distributed over all the islands westward from N. G. to Halmaheira. It seems that the single locality on N. G. is Doreh (Laglaize). In Dobson's Catalogue mentioned as: *Hab.* Pinou-island, Macluer-Bay.

3. *Pteropus conspicillatus* Gould.

Besides other localities in the South and East of N. G. this species is known from Bongu and Madang, German N. G. (Matschie).

4. *Spectrum epularium* Ramsay.

On N. G. only known from Katau, not very distant from the mouth of the Fly-river; this typical specimen has been described in 1877 by Ramsay under the name *Pteropus* (*Epomops?*) *epularius*. Matschie, l. c. p. 23, unites this species with others under the head *Spectrum*, a genus invented by Gray, l. c. p. 100.

5. *Spectrum hypomelanum* Temminck.

Described by Temminck in 1853 (Esquisses zoologiques sur la côte de Guinée, p. 61) after several specimens from Ternate; it now stands as inhabiting about the whole Malayan- and Papuan-Archipelagos, from Engano and Mentawei-islands, Borneo, Celebes, Halmaheira to the Philippines and the Salomo-islands to the Entrecasteaux-group; more extensive material can make out whether there are hidden perhaps a series of species under the name *hypomelanus!* Matschie, l. c. p. 23, suggests that *hypomelanus* Temm., *griseus* Cuv., *pallidus* Temm., *Tomesii* Pet., *ocularis* Pet., *condorensis* Pet., *fuscus* Dobs., *lombocensis* Dobs. and *natalis* Thomas "gehören zu einer und derselben Art und nicht einmal als geographische Abarten getrennt werden können." Also known from the Huon-bay, Eastern N. G. — Matschie, l. c. p. 23, brought *Pteropus hypomelanus* Temm. under Gray's genus *Spectrum*.

6. *Nyctemene cephalotes* Pallas.

Pallas called the species *Vespertilio cephalotes*; the authors have been very unlucky in trying to give it a generic title, so that we find it named *Cephalotes Pallasii*, *Harpyia Cephalotes*, *Cynopterus* (*Uronycteris*) *albiventer*, *Harpyia Pallasii*, *Cephalotes cephalotes* and *Gelasinus*, a generic name without description and never published as such, but given by our travellers in M. S.; lately it has been

pointed out that the eldest name, given in 1800 by Bechstein, is *Nyctemene*. It has been collected in Celebes, Ternate to N. G. and New Pommern; on N. G. from Andai and Mansinam, Arfak Mts., Stefansort on the Astrolabebay and Milne-bay, and on the South Western part at Skroe, collected in 1897 for the Leyden-Museum by Mr. Schaedler.

7. *Nyctemene albiventer* Gray.

Cynopterus (*Uronycteris*) *albiventer* is the name given by Gray (P. L. Z. S. 1862, p. 262) to a bat from Morotai, collected by Wallace; this bat has lateron been brought in the *Cephalotes*-group as being a *Cephalotes cephalotes*-specimen; Thomas (1900, Ann. Mag. N. H. Vol. V, p. 217) distinguished among the so-called *Cephalotes cephalotes*-specimens some ones with smaller forms and said that the British-Museum possesses of these latter ones examples from Morty island, Admirality islands, Key islands, British N. G., and Cape York; they represent specimens of Gray's old species *albiventer*. So that, if Thomas is right, we have a new species of the *Cephalotes*-group to enregister in N. G. viz: *Nyctemene albiventer* Gray from British N. G.

8. *Bdelygma major* Dobson.

Like the foregoing genus, this genus figures in Matschie's book, l. c. p. 84, as a subgenus; Matschie has bestowed upon it the subgeneric name of *Bdelygma* for the reception of a single species (*major*), which up to 1877 had been confounded with the foregoing species *cephalotes*. Found from Misool to Duke-of-York-island, New Ireland and the Salomo-islands †); in N. G. it has been found on the south of the Huon-gulf.

†) Oldfield Thomas described a specimen, old male, from Woodlark-islands, E. of N. G., as *Nyctemene major lullulae* (Ann. Mag. N. H. 1904, Vol. XIV, p. 197). Like *major* but smaller (Thomas).

9. *Bdelygma aello* Thomas.

In 1900 (Ann. and Mag. Nat. Hist. 7th Series, Vol. V, p. 216) Thomas distinguished under the name *aello* the *Bdelygma major* in Meek's collections from Milne-bay. He cannot see sufficient reason for subdividing the genus *Cephalotes* (now *Nyctemene*) as Matschie did. *Aello* is most nearly allied to *major*, but larger, much more prominently striped dorsally and with a shorter (if this organ is perfect) tail (Thomas).

10. *Dobsonia paliata* Geoffroy.

This at present is the name for the bat formerly known as *Cephalotes Peronii*. My colleagues may be right by rejecting a preoccupied name and by replacing it by an earlier given name, detected often by hap-hazard in some rare old book, however I would ask: are we not on the way to make our science what in "Nature" has been called some time ago "an impossible science"? Every post so to say brings us new surprises and I am convinced that within short we all will make lot of blunders. And if this will be so, what perplexing impression must it make upon the *str. s.* not scientific nature-loving public to hear for instance that the Orang Oetan. *Simia satyrus*, is not an animal from Sumatra and Borneo but from West-Africa, and that the Gorilla is living in the Dutch colonies; that *Cynocephalus* is a winged animal and not a Baboon and therefore it yields its scientific title *Cynocephalus* to the so well known *Galeopithecus*, so that the latter must now be called *Cynocephalus volans*, meanwhile it belongs not more to the *Galeopithecidae* or *Dermoptera* but to the *Colugidae*, a family-name made from the name *Colugo*, by which the *Galeopithecus* on the Philippines is known among the natives (Palmer); Gray (Catalogue a. s. o., 1870, p. 97) called *Galeopithecus volans* "*the Colugo*" and *G. philippinensis* "*the Broad-headed Colugo*". The confusion increases when

looking at the innumerable new species described in the last years, growing so to say every day, so that nobody in the world can by any means keep all those names in remembrance! It never should be forgotten that Nature knows no species, only individuals, and that in reality there are no two animals nor two leaves of two trees exactly alike! It is evident that individuals, belonging to a widely distributed group of animals must be somewhat different when living separated by high mountains, broad rivers or wide seas, by living upon different food and under other degrees of warmth; in describing such a form — which we may call a species — there should be observed and mentioned as accurately as possible the difference in size and color, constant or not constant, for every given locality; in doing so we become a true portrait of the animal; it is the way followed in my Monograph of the genus *Cuscus* (Notes Leyden Museum, 1885), when I described separately every individual. There hardly are two exactly alike — have we therefore to bestow a latin or greec name to every individual showing a slight — mostly a more or less — difference in size or color? I think not. I may be allowed to illustrate my view by an actual example. Take for instance our Common Hare, *Lepus europaeus* Pallas, rather common everywhere in our Fatherland; now our huntsmen distinguish specimens shot in the downs, in the sandy moors and on pasture grounds as down-hares, heath-hares and grass-bellies— and our epicures wholly agree with the huntsmen as they can taste the difference —; nay, the experienced hunters — so one of them and friend of mine told me — see differences between Rabbits from the downs near Katwijk and those from near Zandvoort, a distance of about 26 miles! So Hares living in Noord-Brabant can be distinguished from those living in Holland, in Gelderland, in Friesland a. s. o.; they all show peculiar characteristics in size and color a. s. o. And all these characteristics are variable, so that the Common Hare presents itself in the Netherlands under perhaps six or more forms; and as our country cannot

	Celebes.				Rau.			Morotai.		Ternate.	Batjan.			Misool.			Waai-geou.		Banda.		N. Guinea.	Mefoor.	Amboina.						Boeroe.	Samao.	Timor.				Wetter.	Aroe-isls.					Duke of York.	N. Britain.
	o.	n.	p.	y^2.	v.	w.	x.	n^2.	m^2.	x^2.	u.	t.	u^2.	f^2.	g^2.	h^2.	j^2.	k^2.	r.	s.	o^2.	i^2.	h.	g.	j.	k.	l.	w^2.	q.	q^2.	d.	b.	a.	c.	z.	e^2.	d^2.	a^2.	c^2.	b^2.	p^2.	c^3.
		♀		♂	♂	♂	♂	♀	♂	♀	♂	♀	♀	♀	♀	♂	♂	♂	♀	♀	♂	♂	♂	♀	♀	♀	♀	♀	♀	♀	♂	♂	♂	♂	♂	♀	♀	♀	♂	♂		♂
forearm	97	105		112	124	111	106	130	125	115	125	123	128		115	115	146	138	121	111	150	109	132	130	136	128	122	101	133	134	118	118	99	116	95	137	141	137	141	132	99	110
second finger	66	72	68	67	74	69	67	82	78	74	81	74	78	85	75	62	84	90	72	71	92	69	84	83	81	79	78	60	81	86	71	70	67	67	62	88	84	86	86	84	62	70
third finger, metacarp.	64	70	67	69	74	67	68	82	80	73	81	77	82	84	74	65	94	84	75	72	90	73	84	82	87	84	80	64	80	86	71	73	65	67	62	88	88	87	85	88	60	72
„ „ 1st phalanx.	46	51	50	51	56	52	52	60	56	54	56	55	57	62	54	43	66	65	51	50	68	55	60	59	61	57	56	46	57	62	49	50	47	48	44	63	64	64	64	60	46	51
„ „ 2nd „	60	70	64	76	78	69	68	85	80	76	79	75	81	83	76	65	94	85	68	68	93	79	88	80	82		67	66	76	87	65	70	56	66	64	90	96	98	93	84	58	72
fourth finger, metacarp	60	68	63	66	72	62	62	73	73	67	73	70	74	77	67	60	85	79	67	68	83	69	78	78	80	76	72	60	73	78	65	70	60	64	60	82	82	77	78	81	57	63
„ „ 1st phalanx	38	41	39	44	49	44	44	52	50	47	49	47	50	53	46	38	59	57	44	41	57	45	52	52	54	50	49	39	49	53	39	41	39	40	36	55	56	54	54	53	38	43
„ „ 2nd „	41	45	42	50	52	44	44	54	54	50	52	49	52	53	51	41	62	56	47	44	63	53	58	54			41		53	57	48	47	40	42		61	63	60	60	57	38	46
fifth finger, metacarp	60	68	63	67	74	64	65	75	74	66	74	71	75	77	68	60	86	78	70	70	82	71	82	76	79	79	73	60	73	77	69	72	61	67	64	83	85	79	82	82	59	65
„ „ 1st phalanx	31	35	32	33	38	35	35	42	40	36	40	40	40	41	36	31	45	45	37	35	46	36	42	41	42	40	38	33	39	41	34	34	33	33	30	42	44	43	41	41	30	36
„ „ 2nd „	34	40	36	42	45	38	40	47	47	44	45	42	46	45	42	36	53	48	41	40	53	40	47	47	50	47	43	37	45	46	39	40	35	36	36	48	51	49	48	46	34	41

naturelle des Pays-Bas, Tome XII, 1888; the measures are in millimeters.

A study of this list is very interesting; it teaches us that the length of the fore-arm — generally looked upon as a rather constant thing — varies from 97 to 150 mm., notwithstanding the specimens are adult, as the teeth show; moreover on the skulls all the sutures have vanished by growing, meanwhile the crista is well developed. The individual from Ternate, for instance, has the fore-arm 115 mm., therefore is a good deal shorter than the maximum-length and this notwithstanding the skull presents very deeply grinded-off molars, so that the individual certainly is a full-grown one. Although I am the first to confess that the number of measured specimens is by far not large enough to make conclusions as to the probable or expected constancy in size in individuals from a given locality, still what we can see in the above list seems to point out just the contrary, as I should say.

One would be inclined to consider the individuals from Celebes and Timor as the smallest, growing larger eastwards, f. i. for Celebes, Timor and Wetter: fore-arm 97, 99 and 95 mm. and for N. Guinea 150 mm. — moreover there is in the Dresden-Museum a specimen from Mansinam, Geelvink-bay, the very locality of our large one, having a fore-arm of 148 mm. Dobson however mentioned (P. Z. S. L., 1878) an adult specimen from Amberbaki, East of the Kleine Geelvink-bay, having the fore-arm not longer than 80 mm.; and our Mefoor-specimen presents a fore-arm of 109 mm., therefore about the size of the more westwards living specimens. Matschie (Die Megachiroptera, 1899, p. 86) gives some very interesting comparative measurements in mm. illustrating my views:

	Unterarm.	Fusslänge.	Kopflänge.
Batjan, ♀ ad.	106	24	49
„ ♀ ad.	125	27	57
Key, ♂	121	25	
„ ♀	113	20	

	Unterarm.	Fusslänge.	Kopflänge.
Ceram-laut, ♀ jung [1])	96	28	53
Neu-Lauenburg, ♀	96	24	44

His conclusion is: "ich finde nicht, dass derartige Verschiedenheiten in den Maassen auf geographische Ab-arten hinweisen und stelle die fünf bisher beschriebenen *Cephalotes*-species in einer einzigen Art zusammen".

The study of the other measurements always gives the same negative answer, so too do the dimensions of the skulls.

And now we will take the color into consideration; Geoffroy, the first describer of *paliata*, called the color of his young type-specimen, probably from Timor, "jaune très pale ou la teinte de la paille"; in a later description a small individual was "roux", a larger one "brun", both from Timor; Dobson, l. c., named his specimens "dark brown on the head, paler brown on the neck and shoulders, beneath dull yellowish or greyish brown", and his small Amberbaki-individual from the Paris-Museum seems to present the same tints; Temminck said concerning his specimens from Banda, Samao, Timor and Amboina: "cette série comparée en masse ne nous a fourni aucune différence dans la charpente osseuse, dans le système dentaire, ni dans les formes totales du corps et des membres et seulement des légères différences de teintes dans les couleurs du pelage; qui sont locales, ou simplement dues aux différentes époques de l'année dans lesquelles ces individus ont été tués, au sexe ou à l'âge de ceux-ci." The material at my disposal is not very promising for the theory of local forms; it seems, generally spoken, that the individuals from the western parts have a lighter hue combined with

1) im Zahnwechsel!

smaller size, meanwhile the eastwards-ones are darker colored and show larger dimensions; as a counterpart to this conclusion, however, Dobson remarked à-propos 15 specimens, adult and young, from Duke-of-York-island, that: "they correspond closely in measurements and other respects with specimens from other parts of the Austro-Malayan subregion" — and our specimen from Duke of York-island shows just a much blacker color than any other specimen in our collection, meanwhile the dimensions of this individual agree much more with those of the small Timor-specimens, the lightest colored of all!

This bat has been collected in New-Guinea from the following localities; Andai (v. Rosenberg, and apud Heller), Amberbaki (apud Dobson), Jobie (apud Heller), Stefansort, Astrolabe-Bay (Kunzmann), Tamata, near the German frontier (Stalker), and Ighiberei, on the Kemp Welch-river, South-East N. G. (Loria).

11. *Carponycteris nana* Matschie.

Carponycteris is a generic name given in 1891 (An introduction to the study of Mammals, p. 654) by Flower and Lydekker instead of *Macroglossus*, given in 1825 by Cuvier to the interesting group of bats with exceedingly long, attenuated tongue — the name *Macroglossus*, according to the named authors, being preoccupied by *Macroglossum*, bestowed in 1777 by Scopoli upon a genus of *Lepidoptera* (Palmer, Index generum mammalium, 1904, p. 393). Si omnes consentiunt, ego non dissentio, although in my ears *us* and *um* sound quite differently! The genus has a very large distribution, from Siam through the Malayan-Archipelago to the Salomo-islands; *C. nana* (Matschie, p. 95) is known from North- and South-N. G., the Aroe-islands and Bismarck-Archipelago; in the Berlin-Museum

is a specimen from Andai, N. G. — Dr. Hagen procured this species at Stefansort, German N. G.

12. *Syconycteris papuana* Matschie.

This bat belongs, like the foregoing species, to the Macroglossine-group; the name *Syconycteris* has been given in 1899 by Matschie, very ad rem as I pointed out in "the Notes from the Leyden Museum, 1901, p. 131." *S. papuana* is known from Amboina, the Aroe-islands and N. G. (Andai and Sorong in the Berlin-Museum and Andai in the Dresden-Museum).

13. *Syconycteris crassa* Thomas.

I never saw a specimen of this species, created in 1895 by Oldfield Thomas for a Macroglossine-individual from Fergusson-island. The species seems to live in the islands eastern from New-Guinea and in N. G.; in the south-eastern part it has been collected at Ighibirei, on the Kemp Welch-river, to the south of the Owen Stanley Mountains, by Dr. Loria (Ann. Stor. Nat. di Genova, 1897, p. 608).

14. *Melonycteris melanops* Dobson.

Another rare member of the Macroglossine-group, as it seems, from the same localities as the former species; in the Berlin-Museum there is a young male-specimen from N. G., Mac Cluer-bay, South-west N. G. (Gazelle-expedition, Matschie, l. c. p. 93).

15. *Rhinolophus fallax* Andersen.

Described after an adult male, the only specimen known, in the collection of the Genoa-Museum; it has been collected at Ighibirei, on the Kemp Welch-river, South-eastern N. G., by Dr. Loria (Ann. Mus. Genova, 1906, p. 173).

The genus *Rhinolophus* was hitherto unrepresented in New-Guinea. This species is closely related to *Rh. megaphyllus* from the Australian Continent and the Louisiade Archipelago. In all important respects the two species are on the same level of development. But externally *Rh. fallax* is readily distinguished by its broader horse-shoe (Andersen).

16. *Hipposideros diadema* Geoffroy.

Hipposideros Gray, 1831 (Palmer, 1904, p. 327), is an elder name for *Phyllorhina*. D'Albertis collected a specimen of this species at Andai, N. W. New-Guinea (Ann. Mus. Genova, 1880, p. 692). Mr. Oldfield Thomas (Ann. Mus. Genova, 1897, p. 608) found in Dr. Loria's collection, made in British New-Guinea, 19 specimens from Haveri, near Mount Wori-Wori, and 1 specimen from Aroma, east from the mouth of the Kemp Welch-river. This species seems to have been found from the Himalaya to Ceylon, Indochina, over the whole Malayan-Archipelago to the Philippines and New-Guinea.

17. *Hipposideros galeritus* Cantor.

Known from the Indian Continent and the eastern parts of the Malayan-Archipelago. Peters and Doria (Ann. Mus. Genova, 1880, p. 693) said that d'Albertis collected specimens from the Fly-river, S. W. British N. G.

18. *Hipposideros tricuspidatus* Temminck.

Dobson (P. Z. S. L. 1878, p. 876) found in the collections of the Paris-Museum several specimens belonging to this species, obtained by M. Raffray in New-Guinea. This is the first recorded instance of this species having been found in this island, which, however, it was to be expected to inhabit, as it had been noted from Batchian,

Amboina, Morty and Duke-of-York-island (Dobson). Beccari procured specimens from Andai, N. W. New-Guinea.

19. *Hipposideros cervinus* Gould.

Known, besides from Australia (Gould's type), from New-Guinea and neighboring islands. Bernstein (Leyden-Museum) collected a specimen in 1866 at Sorong, Laglaize (Paris-Museum) specimens at Amberbaki, N. West N. G., Dr. Hagen from Stefansort, German N. G.; Loria presented 30 specimens to the Genoa-Museum from Haveri, among the mountains behind the Astrolabe range, near Mount Wori-Wori, S. E. N. Guinea.

20. *Hipposideros calcaratus* Dobson.

According to Peters and Doria (Ann. Mus. Genova, 1880, p. 693) this species has been collected by Beccari and d'Albertis at Andai and Doreh, N. W. N. Guinea. The type-specimen is from Duke-of-York-island.

21. *Hipposideros muscinus* Thomas et Doria.

The typical specimens have been collected by d'Albertis on the Fly-river, central N. G., after that recorded from Arnhem-land, N. Australia, by Collett and finally sent to the Genoa-Museum by Loria from Haveri, near Mount Wori-Wori (Ann. Mus. Genova, 1897, p. 608).

22. *Hipposideros papua* Thomas et Doria.

Described after three specimens collected for the Genoa-Museum by Beccari in the island Mysore, Geelvink-bay, N. G. Of these specimens two are presently in the Genoa- and one in the British-Museum (Ann. Mus. Genova, 1886, p. 204).

23. *Nyctophilus timoriensis* Geoffroy.

According to Dobson (Catalogue, p. 174) this species is to be found from Timor to Tasmania and from West Australia to the Fiji-islands. Loria procured several specimens from Kamali, close to the mouth of the Kemp Welch-river, besides one specimen from Kapa Kapa, a little further east (Ann. Mus. Genova, 1897, p. 608).

24. *Nyctophilus microtis* Thomas.

Oldfield Thomas stated: that this species was discovered at Sogere, also in the Owen Stanley district, by Mr. H. O. Forbes; a specimen from Inawi, on the Guiseppe-river, which runs into Hall Sound, S. E. N. G., by Loria, agrees with the type in all respects.

25. *Pipistrellus orientalis* Meyer.

Described after several specimens from Bongu, Astrolabe-bay, Eastern N. G. The author suggests that it may be perhaps a species close to or agreeing with *P. papuanus* Peters et Doria (from Salawattie).

26. *Pipistrellus abramus* Temminck.

Mentioned by Peters and Doria (Ann. Mus. Genova, 1881, p. 696) as collected by d'Albertis from Katau, Fly-river and Port Moresby. This very widely distributed species has been exhibited in Dobson's Catalogue as found by Dr. Comrie south of the Huon-Gulf, N. E. N. G.; in Dr. Loria's collection were specimens from Kamali and Hula, both localities close to the mouth of the Kemp Welch-river, from Ighibirei on the Kemp Welch-river, from Kapa Kapa a little further east than Hula on the sea-coast, from Aroma, still further east, and from Haveri, near Mount Wori-Wori (Ann. Mus. Genova, 1897, p. 609). Dr. Hagen (1899) enumerated the species among the mammals of the Astrolabe-bay.

27. *Leuconoë adversus* Horsfield.

From Siam, Borneo and Java to New-Guinea and Australia; von Rosenberg collected in 1869 a specimen for the Leyden-Museum from Doreh, meanwhile Laglaize found specimens at Amberbaki (P. Z. S. L. 1878, p. 876) and d'Albertis collected specimens at the Fly-river (Ann. Mus. Genova, 1881, p. 696).

28. *Philetor Rohui* Thomas.

This is a very peculiar bat; according to the description of the type its general facies is rather as in *Pterigystes* (*Vesp. noctula, Leisleri, azoreum*), it has premolars as in *Vespertilio* (*Vesperugo* Auct.) and its incisors are shaped as in *Tylonycteris* (a generic title given by Peters to *Vesp. pachypus*); besides to *Vespertilio* and *Tylonycteris* it is allied to *Hesperoptenus* (*Vesp. Tickelli, Doriae, Blanfordi*); it has very complicated male- and female organs. These bats have been procured by Mr. Rohu in the Albert Edward ranges, dividing German- and British New-Guinea (Ann. Mag. Nat. Hist. 1902, p. 220).

29. *Scotophilus Greyii* Gray.

This seems to be a rare bat, being only known from Australia till Thomas found in Loria's collections 27 specimens from Kamali, close to the mouth of the Kemp Welch-river and one from Aroma, further east on the sea-coast, so that the species is now known as to inhabit the south-eastern part of New-Guinea (Ann. Mus. Genova, 1897, p. 609).

30. *Kerivoula papuensis* Dobson.

The type of Dobson (Catalogue, p. 339) from Turner's collections has been captured at Port Moresby, S. E. N. G. As far as I am aware specimens besides the type never have been seen, so that it till now remains a unicum.

31. *Miniopterus Schreibersii* Natterer.

There seems to be in the British-Museum a specimen of this so widely distributed species from New-Guinea; Dobson mentioned it in his Catalogue, p. 350; as it belongs to Turner's collection it very likely originated from Port-Moresby, S. E. N. G.

32. *Emballonura Beccarii* Peters et Doria.

Beccari collected two male-specimens at Ansus, in the island of Jobi, Geelvink-Bay, the types of the species (Ann. Mus. Genova, 1881, p. 693). No other specimens have been recorded, as far as I am aware.

33. *Mosia nigrescens* Gray.

It has been found on several islands east and west from New-Guinea, so that it was very likely that it too inhabits this island. Mr. Stalker collected a male and a female at the Gira-river, British N. G. (Ann. Mag. Nat. Hist. 1904, p. 398); Thomas examined two specimens from N. G. (Ann. Mag. N. H. 1904, p. 201).

34. *Taphozous australis* Gould.

I see in Dobson's Catalogue, p. 382, that there is in the British-Museum an adult male presented by Mrs. Stanley as originating from New-Guinea, without further reference as to the exact locality. It has not been recorded from that island by later authors, as far as I could point out.

35. *Nyctinomus plicatus* Buchanan-Hamilton.

I see in Ann. Mus. Genova, 1881, p. 695, that Peters and Doria exhibited this species from the island Jobi, Geelvink-Bay, by Beccari, as being the first example of a Molossines-pecies in New-Guinea.

36. *Nyctinomus australis* Gray.

Recorded in Dobson's Catalogue, p. 434, from New-Guinea, without closer locality, presented by Mrs. Stanley; that specimen is the type of the species (British-Museum).

37. *Nyctinomus Loriae* Thomas.

Oldfield Thomas (Ann. Mus. Civ. Genova, 1897, p. 609) said that it is closely allied to *N. norfolkensis* Gray of which it evidently is the Papuan representative. Loria collected the typical specimens of the species at New-Guinea, 10 from Kamali, close to the mouth of the Kemp Welch-river, on the promontory that ends in Cape Hood, and 5 from Aroma, on the sea-coast further east.

38. *Mormopterus astrolabiensis* Meyer.

Described by Dr. A. B. Meyer (Abhandl. Dresden-Mus. 1899, 7, p. 19) after a male-specimen from Bongu, Astrolabe-Bay, German New-Guinea. No other specimens are known.

RODENTIA.

39. *Limnomys asper* Thomas.

This genus, says Thomas, is closely allied to *Hydromys* but less strongly specialized for aquatic life; it would seem to be an early development of the *Hydromys*-type, less modified for aquatic life than in that genus, but showing many characters in common with it (Ann. Mag. Nat. Hist. 1906, pp. 325 and 326). The type-specimen of *L. asper* is from Mount-Gayata, Richardson Range, British New-Guinea. Not to confound with *Mus asper* Miller (Proc. Biol. Soc. Wash. 1900) from Siam a. s. o.

40. *Hydromys Beccarii* Peters.

The type of this species is from the Key-islands; later on (Ann. Mus. Genova, 1880, p. 706) Peters exhibited a specimen from the Fly-river, S. E. New-Guinea, meanwhile Thomas mentions a young from Loria's collections also from N. G., Haveri, mountains behind the Astrolabe Range, near Mt. Wori-Wori (Ann. Mus. Genova, 1897, p. 609). Not to confound with *Mus Beccarii* Jentink (Notes Leyden Museum, 1880, p. 11, published Nov. 1879), from Celebes, and *Mus Beccarii* Peters et Doria (Ann. Mus. Civ. Genova, 1880, p. 700) from Sorong, N. G. = *Mus Doriae* Trouessart (Catalogus Mammalium, 1898/99, T. I, p. 472).

41. *Hydromys esox* Thomas.

The only species with which this water-rat need be compared is *H. Beccarii* Peters; the typical specimen, an adult male, is from Port-Moresby, British N. G. (Ann. Mag. Nat. Hist. 1906, p. 324).

42. *Leptomys elegans* Thomas.

Very similar in size and general appearance to *Uromys levipes;* molars strictly Hydromyine in structure, but $^3/_3$ in number (Ann. Mus. Civ. Genova, 1897, p. 610). The type, an adult male, is from British New-Guinea — exact locality unknown.

43. *Mus ruber* Jentink.

The type, an adult female, has been described in the Notes from the Leyden Museum, 1880, p. 18. That specimen had been collected by von Rosenberg in 1870 at Doreh, New-Guinea. At first sight it resembles *Mus neglectus* Jentink, but is at once distinguished by its very soft hairs, without any trace of flexible spines.

44. *Mus Goliath* A. Milne Edwards.

This species together with the following are the last products of the pen of the late Alphonse Milne Edwards — il a rédigé ce travail peu de jours avant sa mort (Oustalet, Bull. du Mus. d'Hist. Nat. 1900, p. 165).

It belongs to the largest mice known; it has been collected: "dans la partie haute du bassin de la rivière Aroa, la Nouvelle Guinée anglaise, à une altitude de 3000 à 7000 pieds".

45. *Mus barbatus* A. Milne Edwards.

Very like *Mus Goliath*; from the Aroa-river, British New-Guinea.

46. *Mus terrae reginae* Alston.

Fide Oldfield Thomas (Ann. Mus. Genova, 1897, p. 611) *Mus ringens* Peters et Doria appears to be certainly synonymous with Alston's species. One specimen, viz. the type of *ringens*, described in the Ann. Mus. Civ. Genova, 1880/81, p. 700, after a female from the Fly-river, has been collected by d'Albertis. Mr. Monckton, from Port-Nelson, presented a male to the British-Museum, captured in N. E. Br. N. G., at 8° 30′ S. lat. and 148° E. long. Thomas exhibited two males from Gerekanumu, on the southern slope of the Astrolabe Range, collected by Loria, 1893.

47. *Mus praetor* Thomas.

It has a strong superficial resemblance to *Mus terrae reginae*, from which however it readily may be distinguished by its shorter ears, darker coloured feet, much shorter and wholly black tail and especially by its possession of two pairs of pectoral mammae instead of only one. Head and body 168 and 188 mm., tail 118 and 134 mm. — Thomas said that specimens of this species were known from Aola,

Guadalcanar (Woodford) and Kabahadai, New-Britain (Brown), and that there were in Loria's collections 2 specimens from Haveri, among the mountains behind the Astrolabe Range, near Mount Wori-Wori, S. E. New-Guinea (Ann. Mus. Genova, 1897, p. 611).

48. *Mus Doriae* Trouessart.

This is *Mus Beccarii* Peters et Doria, a name preoccupied by *Mus Beccarii* Jentink. Dr. Beccari presented the type, an adult female-specimen with its young, from Sorong, West N. G., to the Genoa-Museum (Ann. Mus. Civ. Genova, 1880/81, p. 700). Trouessart was quite right in giving the species another name, viz. *Doriae* (Trouessart, Catalogus Mammalium, 1898/99, T. I, p. 472).

49. *Mus mordax* Thomas.

Closely allied to *Mus praetor*, of which it appears to be the Papuan representative. Besides the typical specimen, a female, Mr. Monckton, Resident at Port-Nelson, N. E. Br. N. G., has sent an imperfect skull showing similar characters as the typical skull, while Mr. Stalker obtained in the Conflict-islands, off the S. E. corner of N. G., an example of what also appears to be the same species (Ann. Mag. N. H. 1904, p. 398).

50. *Mus Browni* Alston.

According to Peters and Doria *Mus echimyoides* Ramsay is a synonym of this species. It belongs to a group of large mice, all characterized by the possession of 8 mammae (Thomas, Ann. Mus. Gen. 1897, p. 612). Besides the type from Duke-of-York-island, specimens have been procured at the Humboldt-Bay (Beccari, 1875), at Hattam and at Aroma, Kapa Kapa, Irapura and Hula, all rather close to the mouth of the Kemp Welch-river, from Bara

Bara, opposite Killerton-island in Milne-Bay, and finally from Inawi on the Giuseppe-river, which runs into Hall-Sound (Loria, 1890—1893).

51. *Mus Gestri* Thomas.

Collected by Loria at Kapa Kapa, on the sea-coast, east from the mouth of the Kemp Welch-river, S. E. New-Guinea. Mammae 10 (Ann. Mus. Genova, 1897, p. 611).

52. *Mus exulans* Peale.

I see in Trouessart's Catalogue New-Guinea exhibited as one of the localities. As yet I cannot find out the Museum where specimens form this locality are preserved.

53. *Mus Albertisii* Peters et Doria.

The type-specimens have been collected by d'Albertis at Sorong, West N. G. It is a mouse smaller than *Mus musculus*; it has 8 mammae (Ann. Mus. Genova, 1881, p. 702).

54. *Mus verecundus* Thomas.

Mr. Meek secured the type-specimens at Avera, Aroa-river, British N. G.; two other specimens came from Dinawa, Owen Stanley Range, altitude 4000 feet, by Mr. Pratt. Size about as in *Mus rattus*, with 6 mammae (Novit. Zoolog. 1904, p. 598).

55. *Mus niobe* Thomas.

Allied to *Mus verecundus*, but size decidedly less, skull very similar to that of *verecundus* and teeth as in that species. It is based upon a young adult specimen, collected by Mr. Meek at Owgarra, Angabunga-river, S. E. British N. Guinea (Ann. Mag. N. H. 1906, p. 327).

56. *Mallomys Rothschildii* Thomas.

The type-specimen, an adult male, is a large stuffed rat in the Tring-Museum; its skull is in the British Museum. It is a very heavy animal, having head and body 40 cm. and tail 38 cm. (my *M. Armandvillei* from Flores has these figures 42 cm. and 35 cm.); it has been captured between Mounts Musgrave and Scratchly, British New-Guinea. The genus *Mallomys* is allied to *Crateromys* (from the Philippines) and *Lenomys* (from Celebes) says Thomas (Novit. Zoolog. 1898, p. 1).

57. *Hyomys Meeki* Thomas.

The type, a female, has been collected by Meek at Avera, Aroa-river, British New-Guinea. Thomas stated that this new genus, *Hyomys*, is not distinguished by any single character of marked importance, but the gigantic rat upon which it is based cannot be referred to any of the known Papuan genera of *Muridae*. Head and body measure 39 cm., tail 34.5 cm. (Ann. Mag. N. H. 1903, p. 198). Fur harsh, a number of bristles 60 to 70 mm. long; it was no doubt an arboreal animal, as indicated by its shortened hind-feet, and it is probable that the large pointed scales of its tail served a purpose analogous to that of the caudal "climbing-irons" of *Anomalurus* (Thomas, l. c., p. 199).

58. *Anisomys imitator* Thomas.

Another new genus of rats with a single species, based upon a male and a female, collected by Meek in British New-Guinea, Avera, Aroa-river. This genus seems to be even less allied to any known one than *Hyomys* and it cannot be said what are its nearest relations. Size large, form less bulky than in *Hyomys*; mammae 6; molars small and delicate; the lower incisors nearly resemble in shape those of *Daubentonia*; combined they are of only the same breadth in front as a single upper

one, while in depth the lower teeth exceed the upper by a third. Head and body measure 30 cm., tail 32 cm. Externally it can only be distinguished from large Papuan *Uromys*-species by its darker colour and its slightly hairy tail (Thomas, Ann. Mag. N. H. 1903, p. 200).

59. *Uromys validus* Peters et Doria.

The genus *Uromys* has been created by Peters in 1867 for the reception of mice characterized by "dickern polygonalen, nicht in so regelmässigen Ringeln stehenden und nicht sich deckenden Schwanzschuppen". *Uromys validus*-specimens have been collected by d'Albertis at Katau, S. E. New-Guinea; other ones from Loria's collections are from Haveri, near Mount Wori-Wori and from Kapa Kapa and Aroma, east from the mouth of the Kemp Welch-river. Probably not distinct from *Uromys macropus* Gray, said Thomas (Ann. Mus. Genova, 1897, p. 616). Head and body 20 cm., tail 20 cm.

60. *Uromys Bruynii* Peters et Doria.

Type-specimens from Salawattie described in 1876 by Peters and Doria; collected by d'Albertis on the Yule-island and at the Fly-river, and by Loria everywhere between the Owen Stanley Range and the sea, in or near the watershed of the Kemp Welch-river. There seems to be an extraordinary variability of this animal in size, according to Thomas, varying between 9 to 16 cm. The same author remarked that it is possible that the name *Bruynii* will ultimately have to give way to *cervinipes*, Gould's *Mus cervinipes* being a member of this group (Ann. Mus. Genova, 1897, p. 617).

61. *Uromys levipes* Thomas.

Collected by Loria at Haveri, near Mount Wori-Wori, and at Gerekanumu, on the southern slope of the Astro-

labe Range, S. E. N. G. — Mr. Stalker obtained a number of specimens referable to this species (Ann. Mag. N. H. 1904, p. 202). General characters very much as in *U. Bruynii*, but distinguished by its long narrow feet, which are quite different from the broad climbing feet of its ally; it is no doubt much less arboreal in its habits. Head and body 147—152 mm., tail 131—141 mm., hind-foot 36—37 mm. (Ann. Mus. Genova, 1897, p. 617).

62. *Uromys Moncktoni* Thomas.

This species is no doubt closely allied to *Uromys levipes*, but is distinguishable by its buffy instead of clear greyish belly, and by the unusual number and length of the hairs on the tail; skull very much as in *levipes*. The type-specimens have been collected by Monckton, Resident at Port-Nelson, N. E. British New-Guinea. Head and body 16 cm., tail 12.7 cm. (Ann. Mus. Gen. 1897, p. 399).

63. *Uromys platyops* Thomas.

A medium-sized species, with a low flat skull; head and body about 144 mm., tail 116 mm.; this species is allied to *U. levipes* and *U. Moncktoni*; from the first it differs by its much shorter hind feet, from the latter by its clear greyish belly and naked tail, from both by its unusually low skull. Two specimens collected by Meek at the head of Aroa-river, S. E. British New-Guinea (Ann. Mag. N. H. 1906, p. 328).

64. *Uromys Stalkeri* Thomas.

A member of the *Uromys Bruynii*-group; it is distinguishable from its allies by its proportionally large brain-case and small muzzle; the narrow area of pure white along its under-surface is also characteristic. Head and body

135 mm., tail 137 mm. Based upon a female, collected by Mr. Stalker on the Gira-river, British New-Guinea (Ann. Mag. Nat. Hist. 1904, p, 202).

65. *Uromys gracilis* Thomas.

A medium-sized animal with a long tail and narrow skull; readily distinguishable from its nearest ally, *U. Stalkeri*, with which it agrees in colour, by its longer tail and markedly narrower interorbital region. Head and body about 140 mm., tail 175 mm. The species is based upon two specimens, collected by Meek at Owgarra, Angabunga-river, S. E. New-Guinea (Ann. Mag. Nat. Hist. 1906, p. 328).

66. *Uromys rufescens* Alston.

The type-specimen is from Duke-of-York-island and described by Alston in P. Z. S. L. 1877; in the very year 1877 described under the name *musavora* by Ramsay from the same island. It is most allied to *Uromys Bruynii*, but a third smaller, more uniformly rufous in colour and the tail, 107 mm., markedly shorter than head and body (125 mm.). In the Leyden-Museum there are three specimens from Sorong, W. N. G., collected by Dr. Bernstein in 1859.

67. *Uromys papuanus* Meyer.

Dr. A. B. Meyer discovered in May 1873 a to *Uromys aruensis* Gray (Aru-islands) closely allied species, on New-Guinea, near Rubi, the south point of Geelvink-Bay, and called it *Uromys papuanus*. No further description exists, as far as I am aware (Ann. Mag. N. H. 1876, p. 146).

68. *Pogonomys mollipilosus* Peters et Doria.

Mr. A. Milne Edwards created the genus *Pogonomys*, having: "la queue, velue dans sa portion anale, ensuite absolument glabre" (Compt. rend. Acad. Paris, 1877, p. 1081); Mr. Oldfield Thomas described a new form, *Chiruromys* as he called it: "with the terminal portion of the tail above with scales, quite naked, transversely wrinkled and obviously prehensile" (P. Z. S. L. 1888, p. 237). In 1897 however Thomas proposed to combine the two groups in one genus, under the eldest name *Pogonomys* (Ann. Mus. Genova, 1897, p. 613). The species *mollipilosus* has been based upon a single male-specimen, collected by d'Albertis (Ann. Mus. Genova, 1881, p. 609) at Katau, West of the Fly-river; head and body 10 cm., tail 16.5 cm. A female-specimen from Loria's collection should evidently be referred to this species, said Thomas (Ann. Mus. Genova, 1897, p. 613); the animal's habitat was Moroka, near Mount Wori-Wori, British New-Guinea.

69. *Pogonomys dryas* Thomas.

Closely allied to *mollipilosus*, but ears much larger. Based upon two individuals from Dinawa, Owen Stanley Range, British New-Guinea (altitude 1300 m.); head and body 114 mm., tail 184 mm.; this animal was from Pratt's collection. Two other skins collected by Meek at Avera, Aroa-river, British N. G., belong to this species (Nov. Zool. 1904, p. 600).

70. *Pogonomys macrourus* A. Milne Edwards.

This is the typical species of the genus; the type-specimen has been collected by M. Laglaize at Amberbaki, N. West New-Guinea. The specimen measured: head and body 12 cm., tail 14 cm. (Compt. rend. Acad. Paris, 1877, p. 1081).

71. *Pogonomys Loriae* Thomas.

Readily recognized by its large size, heavy molars, greyish colour, and practically naked tail. A large number has been procured by Loria at Haveri (700 m.), near Mt. Wori-Wori (Ann. Mus. Genova, 1897, p. 613). Head and body 148—149 mm., tail 214—213 mm.

72. *Pogonomys lepidus* Thomas.

A smaller form, with the prehensile part of tail not very strongly differentiated; it is distinguished from all other species of the group by the rich rufous of its body-colour which contrasts markedly with the sharply defined snowy white of the belly. Like *Loriae* and *mollipilosus* it belongs to the less specialized section of the genus, to which I believe, said Thomas, the name *Pogonomys* is specially applicable. A lot of individuals has been collected by Loria at Haveri, near Mount Wori-Wori. Head and body 119—120 mm., tail 169—159 mm. (Ann. Mus. Genova, 1897, p. 615).

73. *Pogonomys Forbesi* Thomas.

This is the type-species of *Chiruromys* Thomas (P. Z. S. L. 1888, p. 237). Based upon a single specimen, an adult female, from Sogore, S. E. New-Guinea (altitude 1750 feet) from Forbes' collections. Loria procured 26 specimens from Bara Bara, Milne-Bay, extreme S. E. corner of New-Guinea. Very similar to *Uromys cervinipes* in size and general appearance. The quite naked terminal inch of the tail without scales above, has the tip with a natural curl upwards, thus showing the prehensile power it possesses. Mammae 6. Head and body 156 mm., tail 222 mm.

74. *Pogonomys lamia* Thomas.

Size small as in *lepidus*; head and body 111—118 mm., tail 161—158 mm. Tail rather coarsely scaled, more hairy than in *Loriae* and *lepidus*, smooth prehensile portion on the upper side of the tip markedly distinct from the scaly and hairy remainder. Collected by Loria at Ighibirei on the Kemp Welch-river, some little way inland, and at Haveri, near Mount Wori-Wori (Ann. Mus. Genova, 1897, p. 615).

75. *Conilurus papuanus* Ramsay.

Mr. Ogilby invented the generic name *Conilurus* for mice resembling small rabbits with a long tail (Transact. Linn. Soc. L. 1841, p. 124). A dozen of species have been described, as belonging to this genus, all from Australia, with the single exception of Ramsay's *papuanus* (Proc. Linn. Soc. N. S. Wales, 1883, p. 18).

MARSUPIALIA.

76. *Phalanger maculatus* E. Geoffroy.

As yet known from the Saleyer-islands eastwards and southwards to New-Guinea and the islands round that large island and to Australia. In my Monograph (Notes from the Leyden Museum, 1885) of this genus I pointed out the endless variation in colour, never constant for a given locality, and I described in compact terms every individual separately. In the Leyden-Museum are specimens from Doreh, Andai, Hattam, Windessie, on the Geelvink-Bay, from Jobi, Mefoor and Schouten-island, three islands in the Geelvink-Bay, and from the Lobo-Bay; in the British-Museum from Port-Moresby and Sogore; in the Genoa-Museum from Aroma, east of the mouth

of the Kemp Welch-river and from Gerekanumu, on the southern slope of the Astrolabe Range; Heller mentions: Doreh, Warbusi, Sorong, Jobie, Mefoor, Stefansort, Moresby-Bay, Sogore and the Fly-river.

77. *Phalanger orientalis* Pallas.

For details see my Monograph of the genus (Notes Leyden Museum, 1885) and Thomas' Catalogue (1888). In the Leyden-Museum are specimens from Jobie and Soëk, islands in the Geelvink-Bay; in the British-Museum from N. W. N. G., from the Huon-Gulf, Port-Moresby and Sogore, S. E. N. G.; in the Genoa-Museum are individuals from Haveri (Astrolabe Range), Gerekanumu (southern slope of the Astrolabe Range), Aroma (east of the mouth of the Kemp Welch-river), Bara Bara (opposite Killerton-island in Milne-Bay at the extreme S. E. corner of N. G.) and from the Upper Vanapa district (British N. G.); Heller mentions: Passim, Finschhafen, Huon-Gulf, Stefansort, Port-Moresby, Sogore and Yule-island.

78. *Phalanger vestitus* A. Milne Edwards.

Based upon a single young specimen, collected by Laglaize on the Karons-Mountains, New-Guinea (Comptes rend. Acad. Sciences, 1877, p. 1080). This animal was living at an altitude of 2000 m. and *orientalis* lives there at 1000 m. altitude.

79. *Phalanger Carmelitae* Thomas.

Allied to *orientalis*, but the skull smaller and with a differently shaped interorbital region (Oldfield Thomas, Ann. Mus. Genova, 1898, p. 5). The dark colour is constant in the three specimens collected by Loria in the mountainous part of the Vanapa-river, British New-Guinea. Head and body of an old male 440 mm., tail 435 mm.; basal length of skull 73 mm., greatest breadth 52 mm.

80. *Phalanger leucippus* Thomas.

Another new form of *Phalanger* from about the very locality of *Carmelitae*, collected by Loria on the Upper Vanapa-river, British New-Guinea. Size rather smaller than in *orientalis*; skull, although that of a fully adult male, very like that of the female of *orientalis*, so far as the interorbital region and its ridges are concerned; premolars abnormally large; the male grey as in females of other species. Head and body of an adult male, the single specimen whereupon the species has been based, 480 mm., tail 340 mm.; skull, basal length 79 mm., greatest breadth 55 mm. (Thomas, Ann. Mus. Genova, 1898, p. 7).

81. *Pseudochirus Schlegelii* Jentink.

The single known specimen is an adult male, the type, from the Arfak-Mountains, New-Guinea, procured through Mr. Frank in 1879 (Notes Leyden Museum, 1884, p. 110). Head and body 26 cm., tail 25 cm.; skull, basal length 51 mm., greatest breadth 30mm.

82. *Pseudochirus Forbesi* Thomas.

Forbes collected two specimens, a male and female, at Sogore, S. E. New-Guinea (1750—2000 feet). Agreeing very closely with *canescens* and *Schlegelii* it yet differs remarkably from all in the total suppression of its posterior incisors and anterior premolars (Thomas, Catalogue, 1888, p. 184). Head and body 280 and 225 mm., tail 230 and 152 mm.; skull, basal length 47.7 mm., greatest breadth 30 mm. Loria collected specimens from Haveri and Moroka (near Mount Wori-Wori), Gerekanumu (on the southern slope of the Astrolabe Range), and Upper Vanapa district, all British New-Guinea. Dr. Loria's specimens show that the original example had accidentally

lost some of its teeth, as they all possess the full number of three premolars but they, as in the type, are of excessively small size (Ann. Mus. Genova, 1897, p. 620).

83. *Pseudochirus Corinnae* Thomas.

In spite of its superficial resemblance to *Ps. Albertisii* this species may be readily recognized by the absence of the marginal bristles to the ears, by its uniform dull fulvous belly and by its narrower nasals and smaller bullae (Thomas, Ann. Mus. Genova, 1897, p. 143). The name *Corinnae* has been given after Loria's sister *Corinna*; Loria discovered two males in the Mountains of Vanapa, British New-Guinea. Head and body 310 mm., tail 320 mm.; skull, basal length 63.5 mm., greatest breadth 41 mm.

84. *Pseudochirus Albertisii* Peters.

The type-specimen is from d'Albertis' collections, procured at Hattam, Arfak-Mountains, N. W. New-Guinea (Ann. Mus. Genova, 1874, p. 303); specimens from the same locality by Beccari and Bruyn and in the Leyden-Museum. Allied to *canescens* and *Bernsteinii*. Head and body 34 cm., tail 31 cm. (Peters and Doria, 1880, p. 674); skull, basal length 60 mm., greatest breadth 39 mm. (Thomas, Catalogue, 1888, p. 185). — What is *Ph. grisescens* (Peters, Ann. Mus. Genova, 1874, p. 303)? Perhaps a translation of *Phalanger grisonnant?*

85. *Pseudochirus Albertisii coronatus* Thomas.

The type-specimen is a young, collected by Mr. Burke in the Arfak-Mountains, N. W. New-Guinea; it has the fur of the body enormously lengthened (to 35 mm. long). Head and body 250 mm., tail 220 mm.; skull, basal length 48.5 mm., greatest breadth 32.2 mm. The British-

Museum possesses a specimen of the typical *Albertisii* from Moeri, also in the Arfak Mountains, at about 1000 m. altitude. At these two altitudes Mr. Burke also collected specimens respectively referable to *Phalanger orientalis typicus* (1000 m.) and *Ph. o. vestitus* (2000 m.), whose differences in pelage are very similar to those found in the two *Pseudochiri* (Thomas, Ann. Mus. Genova, 1897, p. 144).

86. *Pseudochirus cupreus* Thomas.

Based upon two specimens from Mount Owen Stanley, British New-Guinea, purchased of Messrs. Mc. Ilwraith and Co. This species may be readily distinguished from its allies by its large size, dark colour, naked tail-tip, different supraorbital ridges and heavy teeth. General colour, uniform dark coppery, very similar to that of *Ps. A. coronatus*. Head and body of an adult male 425 mm., tail 330 mm.; skull: basal length 70 mm., greatest breadth 47 mm. (Thomas, Ann. Mus. Genova, 1897, p. 145).

87. *Pseudochirus canescens gyrator* Thomas.

The origin of the typical *canescens* is unknown. Thomas (Ann. Mag. N. H. 1904, p. 401) distinguished from this species, a young adult male, killed by Stalker at Lindum Creek, Gira-river district, British New-Guinea, under the name *gyrator*; he said it to be surprisingly similar to that species (*canescens*), considering the difference in locality, but that it is decidedly smaller (skull 43 mm. as against 50 mm., in basal length) and that the naked portion of the tail is shorter. Colour very much as in the figure of *Ps. Bernsteinii* [1]) given by Peters and Doria. Head and body 240 mm., tail 175 mm.; skull: basal length 43.3, greatest breadth 28 mm.

1) It should be noticed that the typical *Bernsteinii* Schlegel, preserved in the Leyden-Museum, is from Salawattie, *not* from New-Guinea.

88. *Pseudochirus avarus* Thomas.

Very like *Ps. canescens*, but without the dark ear-patch; skull apparently as in that species; molars slightly smaller than in the type of *gyrator*. This Phalanger, says Thomas, may be readily distinguished from all forms of *Ps. canescens* by its tawny-backed ears, without darkening either on or round them. In most other respects it is very like that species or at least like *gyrator*, with which alone he has been able directly to compare it (Ann. Mag. N. H. 1906, p. 329). Head and body 250 mm., tail 210 mm.; skull: basal length 49 mm., greatest breadth 29.5 mm. This species is based upon a single adult male from Port-Moresby, British New-Guinea.

89. *Dactylopsila trivirgata* Gray.

Described by Gray after a specimen from the Arou-islands. In the Paris-Museum there are specimens from Mounts Arfak, Jobi-island and Waaigeou (fide A. Milne Edwards), collected by Raffray and Laglaize. In the Genoa-Museum are specimens from Mounts Arfak by Beccari, from Katau by d'Albertis (fide Peters and Doria), and from Loria's collections made at Haveri, near Mount Wori-Wori, at Bara Bara, opposite Killeston-island in Milne-Bay, at the extreme S. E. corner of New-Guinea, and from the Upper Vanapa-river. In the Leyden-Museum are specimens from the Arou-islands, Wonoembai and Wokam, collected by von Rosenberg, besides others from New-Guinea.

90. *Dactylopsila Albertisii* Peters et Doria.

Described after an adult female-specimen, collected in N. W. New-Guinea near Sorong, by d'Albertis. It differs from *D. trivirgata* Gray from Arou, by a much longer tail, somewhat shorter ears, smaller size of carpal pad and less broad white back-stripes. Head and body 260 mm., tail 350 mm. (Ann. Mus. Genova, 1875, p. 542). The

named authors changed this name in *angustivittis*, in order to avoid confusion with their new *Pseudochirus*, viz. *P. Albertisii* (Ann. Mus. Genova, 1880, p. 674). *Albertisii* however has the priority of data. In 1880 Peters and Doria called it a *nuova specie o varietà*, meanwhile Thomas in his Catalogue, p. 161, looked upon it as representing not more than an *individual*, or at most a *slight local variety* of *D. trivirgata*.

91. *Dactylopsila palpator* A. Milne Edwards.

The Paris-Museum received through M. Laglaize a *Dactylopsila*, collected on the south coast of New-Guinea. This specimen, an adult male, has been described by A. Milne Edwards as the type of a new species. Head and body 27 cm., tail 20 cm.; skull: length 6 cm., greatest breadth 4.2 cm. Tail shorter than in *trivirgata*; there are slight modifications in colour, in shape of skull a. s. o., the most striking however is the great length of the fourth finger (Mémoires par la Soc. phil. à l'occasion du centenaire de sa fondation, 1888, p. 173). In the Tring-Museum are more specimens (P. Z. S. L. 1905, p. 267).

92. *Petaurus breviceps papuanus* Thomas.

Thomas separated the *Petaurus*-specimens from the Papuan-subregion from those collected in Australia, the typical locality of *P. breviceps*, as a variety "*papuanus*"; however he remarked "of this race the most typical and strongly marked examples are those from New-Guinea itself and the islands to the north-west, while on the other hand, Aru-island-individuals present so many resemblances to Port-Essington-specimens of the continental form that I have found it impossible to separate specifically the two geographical races" (Catalogue, 1888, p. 159). Head and body 143—138 mm., tail 176—182 mm.; skull: basal length 33.2 mm., greatest breadth 25.5 mm. In the British-Museum are specimens from Doreh, N. W. N. G.

by Kowalewski, from Huon-gulf, E. N. G., by Comrie, from Kaiser-Wilhelmsland by Hagen, and from Port-Moresby, S. E. N. G. by Turner (l. c. p. 159). Loria collected specimens at Haveri, near Mount Wori-Wori, at Hula, close to the mouth of the Kemp Welch-river, at Aroma, further east, and at Bara Bara, opposite Killerton-island in Milne-Bay, at the extreme S. E. corner of New-Guinea. In 1904 Thomas mentioned a female obtained by Mr. Monckton in N. E. British New-Guinea. In the Leyden-Museum there are specimens from Doreh (Hoedt, von Rosenberg, Ruys), from Soëk and Mefoor, islands in the Geelvink-Bay (von Rosenberg), and from Lobo-Bay (Müller and Macklot), besides others from Halmaheira, Batjan, Kajoa, Ternate, Dammar, Arou, Misool and Bismarck-Archipelago.

93. *Dromicia caudata* A. Milne Edwards.

In Laglaize's collections was a single *Dromicia* from the Arfak-Mountains; M. A. Milne Edwards described it as belonging to a new species and called it *caudata*, it having a tail much longer than head and body (Comptes Rend. Acad. Paris, 1877, p. 1079). Head and body 100 mm., tail 144 mm.; skull: basal length 24.4 mm., greatest breadth 18 mm.

94. *Distoechurus pennatus* Peters.

The type-specimen of this remarkable and rare species has been procured by d'Albertis at Andai, N. W. New-Guinea. Head and body 100 mm., tail 123 mm.; skull: basal length 24.5 mm., greatest breadth 18 mm. (Thomas, Catalogue, p. 140). Another specimen has been described by Ramsay from the Ethel-river, S. New-Guinea. In the Leyden-Museum is a much larger male, from Dr. Semmelink's N. G. collections, mentioned by Thomas in his

Catalogue; head and body 106 mm., tail 153 mm. Loria collected specimens at Gerekanumu, Astrolabe-Mountains.

95. *Acrobates pulchellus* Rothschild.

This species differs from *A. pygmaeus* (Australia, N. S. Wales) in its more purplish-brown colour, its broader and more robust head, much shorter tail and comparatively smaller body; it is based upon a single specimen from one of the small islands in Northern Dutch New-Guinea (P. Z. S. L. 1892, p. 546).

96. *Halmaturus agilis* Gould.

If Thomas is right in uniting *H. papuanus* Peters et Doria (Ann. Mus. Genova, 1875, p. 544) with *H. agilis*, then *agilis* inhabits New-Guinea; Thomas however remarked (Catalogue, 1888, p. 44) that the Papuan-specimens appear to be somewhat smaller and to have longer fur and better defined markings than their north-Australian reprensentatives. In the British-Museum are specimens by Broadbent from Port-Moresby, British New-Guinea, in the Leyden-Museum is a specimen from the Fly-river, meanwhile the type-specimen in the Genoa-Museum is from Roro or Yule-island, South-East New-Guinea, by d'Albertis and Tomasinelli. Probably Ramsay's *crassipes* from Port-Moresby belongs to this species. Loria procured specimens for the Genoa-Museum at Waikunina and Aroma, eastwards from the mouth of the Kemp Welch-river.

97. *Thylogale Browni* Ramsay.

Thomas (Catalogue, 1888, p. 51) stated that this species is exceedingly similar to *Brunii* (from the Arou- and Key-islands) in all characters. Indeed it seems that the difference solely is a slight modification of colour.

Head and body (immature male) 540 mm., tail 340 mm.; skull: basal length 84 mm., greatest breadth 45.5 mm. It is known from eastern and south-eastern New-Guinea and from the New-Britain group of islands (Thomas, l. c. p. 52). The name *Thylogale* has been created by Gray in 1837.

98. *Dorcopsis Mülleri* Schlegel.

The type-specimens (in the Leyden-Museum) are from the Lobo-Bay, Southern [1]) Dutch New-Guinea, collected by Müller and Macklot in 1828; other specimens in that collection are from Northern Dutch N. G., Andai (von Rosenberg), from Sorong, N. D. N. G. (Bernstein), from Salawattie (Bernstein) and Misool (Hoedt and Teysmann); in Wallace's collections there were specimens from the latter locality; in the Genoa-Museum there are specimens from Salawattie by Bruyn and from Sorong by Beccari and d'Albertis. Head and body 825 mm., tail 500 mm.; skull: basal length 108 mm., greatest breadth 55 mm.

99. *Dorcopsis luctuosa* d'Albertis.

Smaller than *Mülleri*, ears larger than in that species. It is much more variable in colour than *Mülleri*, and has therefore been made the base of several untenable species (Thomas, Catalogue, p. 90). It is known from Eastern and South-Eastern New-Guinea (extreme E. N. G. by d'Albertis, *type*, and Aleya, S. E. N. G. by Dr. James). Head and body 600 mm., tail 320 mm.; skull: basal length 106 mm., greatest breadth 55 mm. (Thomas, l. c. p. 90).

100. *Dorcopsis Hageni* Heller.

Based upon a single male and female collected by Dr. Hagen at Stefansort, Astrolabe-Bay, German Eastern New-

1) *not* Northern Dutch N. G., as in Thomas' Catalogue.

Guinea. Head and body 710 mm., tail 540 mm.; skull: basal length 123 mm., greatest breadth 57 mm. (Abh. Mus. Dresden, 1897, Bd. VI, 8, p. 7).

101. *Dorcopsis Macleayi* Mikl.-Maclay.

From the southern coast of New-Guinea. In 1888 (Catalogue, p. 92) Thomas said, that the species as described might be a hybrid between *D. luctuosa* and *Macropus* (*Thylogale*) *Browni*; he at that time had no specimens in the British-Museum. Later on however he changed his opinion having studied the specimens from Loria's collections, so that he called it an extremely rare species in collections (Ann. Mus. Genova, 1897, p. 618). Loria collected for the Genoa-Museum specimens at Haveri, near Mount Wori-Wori, among the mountains behind the Astrolabe Range, and from the Upper Vanapa-river. Head and body 490 mm., tail 320 mm.; skull: basal length 85 mm., greatest breadth 48 mm.

102. *Dorcopsis rufolateralis* Rothschild.

Described after a living male from Northern New-Guinea. It appears larger than *Mülleri* (Nov. Zool. 1898, p. 512).

103. *Dorcopsis* (?) *aurantiacus* Rothschild.

Adult female. Head, neck, back, flanks, tail, and outside of limbs bright ruddy orange, with a golden gloss. Hair long, thin, and very harsh and bristly. Sides of face, throat, breast and rest of underside yellowish white, strongly mixed with ashy grey. Ears almost naked, large, yellow. Sides of tail and anterior half white. Hab: New-Guinea. Head and body 730 mm., tail 500 mm.

Note: this is a perfect skin stuffed, but it had no skull when received as a skin (Nov. Zool. 1898, p. 513).

104. *Dendrolagus ursinus* Müller.

The type-specimens in the Leyden-Museum are from South Dutch New-Guinea, Bay Lobo, collected by Müller and Macklot (1828), others in that collection are from N. D. N. G., Doreh, collected by von Rosenberg. In the British-Museum is an adult female from Skroe, Maclure Inlet, W. N. G., from Forbes' collections. The Genoa-Museum received two specimens from the Arfak Mountains by Mr. Bruyn.

105. *Dendrolagus inustus* Müller.

Like *ursinus* this species has been found at the Lobo-Bay (type-specimens from Müller and Macklot, 1828), at Andai (von Rosenberg) and at Doreh (Hoedt); besides specimens from these localities the Leyden-Museum possesses an adult male from Diard's N. G. collections and a young individual from the Arfak Mountains. Wallace has collected specimens also in N. W. N. G., meanwhile Beccari and d'Albertis procured specimens at Sorong, and Beccari at Doreh.

106. *Dendrolagus dorianus* Ramsay.

From the Mount Astrolabe region, S. E. New-Guinea. Thomas remarked (Catalogue, 1888, p. 98): " the reversal of the whole of the fur of the back and the great proportional size of the first incisors are both characters of so much importance as to show that *dorianus* is a species very distinct from any of the other members of the genus; head and body 750 mm., tail 610 mm.; skull: basal length (?) 132 mm., greatest breadth 69 mm." Mr. Waite (Records Austr. Museum, Vol. II, 1892—96, p. 85) exhibitet other specimens from the same locality, among which only one with a skull and this has the occipital region cut; he gave the following figures of the latter: basal length

of skull 127 (?) mm., greatest breadth 78 mm. In the British-Museum is a specimen from Mount Victoria, Owen Stanley Range, meanwhile in Loria's collection was a skin from the Upper Vanapa District, S. E. N. G.

107. *Dendrolagus maximus* Rothschild.

The type-specimen, an adult female, besides a young individual are from Dutch New-Guinea by Bruyn; Rothschild based upon it a new species; it is much larger sized than *inustus*, with which it comes nearest in general affinities and rhinarium (Nov. Zool. 1898, p. 511). Head and body 890 mm., tail 838 mm.; skull: basal length 128 mm.

108. *Perameles moresbyensis* Ramsay.

Mr. Oldfield Thomas (Catalogue, p. 236) had considerable hesitation in retaining this species as distinct from *P. macrura* (North-Australia); but the differences between the two, although slight, seem to be constant, and their respective localities being definitely separated by sea, intermediate specimens are not very likely to occur. It shows how large a range of variation must be allowed between the different species of *Perameles*. Head and body 400 mm.; skull: basal length 72 mm., greatest breadth 35.6 mm. In the British-Museum are specimens from Port-Moresby by Turner, from Aleya, S. E. N. G., by James and from Kalo (1750 feet), S. E. N. G.; in the Genoa-Museum are specimens from Upuli, east of the mouth of the Kemp Welch-river, on the sea-coast, collected by Loria.

109. *Perameles doreyana* Quoy et Gaimard.

Head and body 450 mm., tail 120 mm.; skull: basal length 77 mm., greatest breadth 32 mm. (Thomas, Catalogue, 1888, p. 237). Known from N. W. N. G., Sorong (d'Albertis, Beccari and Bruyn), Doreh (Quoy and Gaimard and Leyden-Museum), Mysore (Beccari) and Soëk, both in the

Geelvink-Bay (von Rosenberg), Mounts Arfak (Leyden-Museum), Hattam (Bruyn); East German N. G., Huon-Gulf (Comrie), Kaiser-Wilhelmsland (Hagen); S. N. G., Katau (d'Albertis), Duke-of-York-island (Brown); Waaigeou (Lesson and Carnot), Salawattie (Hoedt) and Arou-islands (von Rosenberg, Wallace).

110. *Perameles Cockerelli* Ramsay.

Thomas (Catalogue, 1888, p. 239) named as localities: north coast of New-Guinea and islands (Salawatti, Misori and New-Britain group), and Duke-of-York-island. Loria procured specimens at Haveri, near Mount Wori-Wori, behind the Astrolabe Range (Ann. Mus. Genova, 1897, p. 621). Head and body 300 mm., tail 85 mm.; skull: basal length 58.5 mm., greatest breadth 27.6 mm. (Thomas, l. c.).

111. *Perameles raffrayana* A. Milne Edwards.

This species, only known by perhaps not half a dozen of specimens, seems to have a very large distribution over New-Guinea; the type-specimen, an adult male, from N. W. N. G., Amberbaki, by Raffray, is in the Paris-Museum (Ann. Sc. Natur. 1878, T. VII, Art. II, pl. VIII); an other specimen from Huon-Gulf, E. N. G., by Comrie, again another from Goldie's-river, S. E. N. G., by Goldie — the two latter ones in the British-Museum. Head and body 400 mm., tail 185 mm.; skull: basal length 77 mm., greatest breadth 32 mm. (Thomas, Catalogue, 1888, p. 240). Milne Edwards described the hairs "*doux et nullement spiniformes*", meanwhile Thomas called the fur "thick and closy, although hispid, *slightly spinous locally*, but never so spinous as in the members of the *obesula*-group, rather more as in *nasuta*".

112. *Perameles Broadbenti* Ramsay.

The type-specimen in the Sydney-Museum is up to the present day a unicum. Is it really distinct from *raffrayana*? Thomas (Catalogue, 1888, p. 241) said that the distinction of this species from *raffrayana* appears to be somewhat doubtful; the peculiar structure and apparently prehensile nature of the tail, however, induced him for the present to retain the species as distinct. The tail is long, scaly above, covered with transverse flattish scaly tubercles below, to the very tip, blackish above for about two thirds of its length, from thence fawncolour to the tip, sparingly clothed with short hair. Head and body of the type, an aged male, 508 mm., tail 200 mm.; skull: basal length 98 mm., greatest breadth 43 mm. Hab. S. E. New-Guinea.

113. *Perameles longicaudata* Peters et Doria.

The typical and only specimen is an adult female in the Genoa-Museum, collected by Beccari at Hattam, Mounts Arfak, N. W. New-Guinea. This unicum has been measured by Peters and Doria as having head and body 260 mm. and tail 185 mm. (Ann. Mus. Genova, 1876, p. 335 and 1880, p. 672), and by Thomas as having head and body 272 mm., tail 197 mm.; skull: basal length 56.5 mm., greatest breadth 23 mm. (Catalogue, 1888, p. 242).

114. *Perameles ornata* Thomas.

Based upon a single adult male-specimen from Avera, Aroa-river, British New-Guinea, collected by Meek. Essential characters all very much as in *longicaudata*, to whose immediate neighbourhood it is brought by all the characters used in the synopses of species, both external and cranial, of the "Catalogue of Marsupials". Skull and teeth agreeing word for word with the description of those parts of *longicaudata*. Head and body 300 mm., tail 177 mm.;

skull: basal length 57.2 mm., greatest breadth 23.3 mm. In the conspicuous striping of its dorsal surface this handsome species differs from all known Bandicoots, though it was possible that when dried skins of *longicaudata* were examined, some indication of a similar pattern of coloration would be found to exist in that animal (Thomas, P. Z. S. L. 1904, p. 201).

115. *Dasyurus albopunctatus* Schlegel.

The type-specimen, an adult female, is in the Leyden-Museum; it has been procured at Sapoea, Mounts Arfak, W. New-Guinea; in the Paris-Museum there is a specimen from the same Mountains; Dr. B. Hagen's collector captured a young specimen at Simbang, German East New-Guinea; in the Dresden-Museum is a male-specimen from Sattelberg, German East New-Guinea, by Wahnes. For measurements see *D. daemonellus*.

116. *Dasyurus daemonellus* Thomas.

Thomas described this species after a male from Avera, Aroa-river, British New-Guinea, collected by Meek, and a skull by Stalker from the Gira-River; he called it the representative in British New-Guinea of the *albopunctatus* of N. W. New-Guinea, from which it readily is distinguishable by its much greater size (Ann. Mag. N. H., 1904, p. 40). Since however Heller (Abh. Mus. Dresden, 1899, No. 9, p. 2) pointed out that the male of *albopunctatus* is larger than the female (type) and as Thomas' specimen presents measurements just between the named male and female, it seems to me that *daemonellus* is a very doubtful species.

in mm.	♂ Dresden. *albopunctatus.*	♂ Thomas. *daemonellus.*	♀ Leyden. *albopunctatus.*
head and body . . .	360	350	270
tail	300	285	230
skull: basal length . .	68	65.6	—
„ greatest breadth .	45	42	35.4

117. *Phascogale melas* Müller et Schlegel.

The type, an adult male, has been collected by Müller in the Lobo-Bay, S. W. New-Guinea, and is preserved in the Leyden-Museum; later on it appeared that it is a melanistic form of the 20 years later by Schlegel described *thorbeckiana*; therefore *melas* has the priority of date. Bruyn and Beccari procured specimens at Andai, W. N. G., Beccari from the island Jobie, Geelvink-Bay; other specimens have been captured at Salawattie (Hoedt, type-specimens of *thorbeckiana* Schlegel in the Leyden-Museum, and Bruyn). In the Berlin-Museum is a male-specimen from Andai, from Bruyn's collections, described by Peters as *Chaetocercus Bruynii*. Thomas (Catalogue, 1888, p. 280) gives the following measures: head and body 215 mm., tail 201 mm.; skull: basal length 49.5 mm., greatest breadth 30 mm.

118. *Phascogale Wallacei* Gray.

Wallace collected a male-specimen on the Arou-islands described by Gray as *Wallacei*; von Rosenberg procured an adult male for the Leyden-Museum also on the Arou-islands; in the Berlin-Museum is a female-specimen from the Fly-river, described by Peters and Doria as *pilicauda*, according to Thomas an other name for our species; in the Genoa-Museum is, besides this specimen from the Fly-river by d'Albertis, an adult male, collected by d'Albertis at Katau, S. N. G., and a skin from the Upper Vanapa-river, procured by Loria. Head and body 185 mm., tail 168 mm.; skull: basal length 45 mm., greatest breadth 26.6 mm. (Thomas, Catalogue, 1888, p. 281).

119. *Phascogale dorsalis* Peters et Doria.

The type specimens are from Hattam, Mounts Arfak, by Beccari, meanwhile Bruyn procured an adult male too in the Arfak Mountains. Thomas gives the following measu-

rements: head and body 167 mm., tail 149 mm.; skull: basal length 32.7 mm., greatest breadth 18 mm. (Catalogue, 1888, p. 284).

120. *Phascogale Doriae* Thomas.

Closely allied to *dorsalis*. Collected by Beccari and Bruyn in Mounts Arfak, Hattam. Head and body of an adult female 152 mm., tail 152 mm.; skull: basal length 38.5 mm., greatest breadth 21 mm. (Thomas, Catalogue, 1888, p. 283).

121. *Phascogale longicaudata* Schlegel.

The type-specimen, a male, collected by von Rosenberg at Wonoembai, one of the Arou-islands, is preserved in the Leyden-Museum; Loria procured a female, the first specimen from the mainland of New-Guinea, Haveri (700 m.), among the mountains behind the Astrolabe Range, near Mt. Wori-Wori. Thomas remarked (Ann. Mus. Genova, 1897, p. 621) that it seems to differ in no important respect from the description of the Arou-animal; its mammae are four in number, as in *Doriae* and *dorsalis*. Head and body 146 mm., tail 172 mm.; skull: basal length ?, greatest breadth 21 mm. (Thomas, Catalogue, 1888, p. 294).

122. *Phascogale melanura* Thomas.

Based upon two specimens, male and female, from Maroka, British New-Guinea (1300 m.), collected by Loria (Ann. Mus. Genova, 1899, p. 191). Thomas remarked that it is related to *longicaudata*, but smaller and with a shorter tail, which is black and well haired; he gave the following measurements: head and body, ♂ 107 mm., ♀ 106 mm., tail 120 mm. and 128 mm.; skull ♀: basal length 27 mm., greatest breadth 17 mm. The smaller female has after these figures a longer tail than the larger male, and in comparing these measurements with those of *longicaudata* it is evident that, in proportion of head and body, the tail is absolutely of the same length in both species; *melanura*

is an animal living in rather high altitude and it therefore is no wonder that this organ is so very hairy.

MONOTREMATA.

123. *Tachyglossus Lawesii* Ramsay.

The generic title *Echidna* for this group of Mammals being preoccupied for a Fish-genus, we have to accept the next name and this is *Tachyglossus*, given by Illiger in 1811.

The first known specimen of *Lawesii* is from S. E. New-Guinea, Port-Moresby; in the British-Museum is an adult female from the very locality, presented by Prof. Mosely. Head and body 350 mm.; skull: basal length 100 mm., greatest breadth 39.7 mm. It differs much less from the Australian form than the Tasmanian one does, agreeing with it in the relative lengths of the hind claws and in the absence of condyloid vacuities in the skull; its small size, bristle-covered head and belly and narrow skull, however, combined with its different locality, seems so justify its provisional retention as a distinct geographical race (Thomas, Catalogue, 1888, p. 378). Loria collected a specimen at Gerekanumu, on the southern slope of the Astrolabe Range, S. N. G., for the Genoa-Museum; in that Museum is another specimen without exact locality.

124. *Proechidna Bruynii* Peters et Doria.

Under this head have been brought together all specimens with the well known elongated beak, from the North Western part of New-Guinea. The spines are of a white colour in contrast with the black-tipped spines of the foregoing species. In the Leyden-Museum is an adult male of a splendid black, having the whole head, upper-arms, three large patches between the shoulders and along the lower part of the sides of the body of a white colour, hands and feet brown; the spines are numerous and everywhere

visible; the animal is from western N. G. and has been presented to the Museum by Mr. Bruyn. Another large specimen in the same collection is from Hattam, presented by Mr. Th. H. Ruys; it presents the very beautiful black colour all over the animal, with the exception of the base of the beak, the hands half way and the feet, which parts are of a brownish colour; nearly all the spines are hidden under the dense fur. A third individual in the Leyden-Museum is a young one from Andai, presented by Mr. Ruys to our collection; body and legs are of a uniform dark-brown colour; spines almost invisible, so that the animal looks as if spineless. Claws as figured in Weber's paper on "eene nieuwe soort van Proechidna".

125. *Proechidna nigro-aculeata* Rothschild.

The single known specimen is that upon which the species has been based; according to Mr. Rothschild the animal is much larger than *Bruynii*, has a much shorter middle claw of the fore foot than *Bruynii*, all the claws are much broader than in *Bruynii*, and considerably hollowed out on the under surface; finally *nigro-aculeata* has a much longer and stouter tail. The type is from the Charles Louis Mountains, Dutch N. G. (P. Z. S. L., 1892, p. 545), east of the Lobo-Bay.

PACHYDERMATA.

126. *Sus papuensis* Lesson.

I have nothing to add to what I said concerning this Pig in the "Notes from the Leyden Museum" (1891, on the Malayan and Papuan Pigs in the Leyden Museum, and 1905, *Sus*-studies in the Leyden Museum).

127. *Sus niger* Finsch.

I refer to my papers on this species in the "Notes from the Leyden Museum" (1891, "on the Malayan and Papuan Pigs in the Leyden Museum", and 1905 "*Sus*-studies in the Leyden Museum").

I omitted in this review on purpose a small number of mammals mentioned by some authors, on the following grounds: *Mus decumanus* and *Mus rattus* are cosmopolitans, they generally are brought over by way of vessels, so to New-Guinea too; *Sirenia* and *Cetacea* have nothing to do with the land-fauna, moreover round New-Guinea there are no peculiar forms known. Some authors enumerated *Paradoxurus hermaphroditus* among the New-Guinea mammals; I know no specimen from that island and previously am incredulous; perhaps specimens may have been introduced by men, although not very likely.

Recapitulation.

CHIROPTERA.

1. Eunycteris papuana *Peters et Doria.* p. 163.
2. Pteropus chrysauchen *Peters.* p. 163.
3. » conspicillatus *Gould.* p. 163.
4. Spectrum epularium *Ramsay.* p. 164.
5. » hypomelanum *Temminck.* p. 164.
6. Nyctemene cephalotes *Pallas.* p. 164.
7. » albiventer *Gray.* p. 165.
8. Bdelygma major *Dobson.* p. 165.
9. » aello *Thomas.* p. 166.
10. Dobsonia paliata *Geoffroy.* p. 166.
11. Carponycteris nana *Matschie.* p. 171.
12. Syconycteris papuana *Matschie.* p. 172.
13. » crassa *Thomas.* p. 172.
14. Melonycteris melanops *Dobson.* p. 172.
15. Rhinolophus fallax *Andersen.* p. 172.
16. Hipposideros diadema *Geoffroy.* p. 173.
17. » galeritus *Cantor.* p. 173.
18. » tricuspidatus *Temminck.* p. 173.
19. » cervinus *Gould.* p. 174.
20. » calcaratus *Dobson.* p. 174.
21. » muscinus *Thomas et Doria.* p. 174.
22. » papua *Thomas et Doria.* p. 174.
23. Nyctophilus timoriensis *Geoffroy.* p. 175.

24. Nyctophilus microtis *Thomas*. p. 175.
25. Pipistrellus orientalis *Meyer*. p. 175.
26. » abramus *Temminck*. p. 175.
27. Leuconoë adversus *Horsfield*. p. 176.
28. Philetor Rohui *Thomas*. p. 176.
29. Scotophilus Greyii *Gray*. p. 176.
30. Kerivoula papuensis *Dobson*. p. 176.
31. Miniopterus Schreibersii *Natterer*. p. 177.
32. Emballonura Beccarii *Peters et Doria*. p. 177.
33. Mosia nigrescens *Gray*. p. 177.
34. Taphozous australis *Gould*. p. 177.
35. Nyctinomus plicatus *Buchanan-Hamilton*. p. 177
36. » australis *Gray*. p. 178.
37. » Loriae *Thomas*. p. 178.
38. Mormopterus astrolabiensis *Meyer*. p. 178.

RODENTIA.

39. Limnomys asper *Thomas*. p. 178.
40. Hydromys Beccarii *Peters*. p. 179.
41. » esox *Thomas*. p. 179.
42. Leptomys elegans *Thomas*. p. 179.
43. Mus ruber *Jentink*. p. 179.
44. » Goliath *A. Milne Edwards*. p. 180.
45. » barbatus *A. Milne Edwards*. p. 180.
46. » terrae-reginae *Alston*. p. 180.
47. » praetor *Thomas*. p. 180.
48. » Doriae *Trouessart*. p. 181.
49. » mordax *Thomas*. p. 181.
50. » Browni *Alston*. p. 181.
51. » Gestri *Thomas*. p. 182.
52. » exulans *Peale*. p. 182.
53. » Albertisii *Peters et Doria*. p. 182.
54. » verecundus *Thomas*. p. 182.
55. » niobe *Thomas*. p. 182.
56. Mallomys Rothschildii *Thomas*. p. 183.
57. Hyomys Meeki *Thomas*. p. 183.
58. Anisomys imitator *Thomas*. p. 183.

59. Uromys validus *Peters et Doria*. p. 184.
60. » Bruynii *Peters et Doria*. p. 184.
61. » levipes *Thomas*. p. 184.
62. » Moncktoni *Thomas*. p. 185.
63. » platyops *Thomas*. p. 185.
64. » Stalkeri *Thomas*. p. 185.
65. » gracilis *Thomas*. p. 186.
66. » rufescens *Alston*. p. 186.
67. » papuanus *Meyer*. p. 186.
68. Pogonomys mollipilosus *Peters et Doria*. p. 187.
69. » dryas *Thomas*. p. 187.
70. » macrourus *A. Milne Edwards*. p. 187
71. » Loriae *Thomas*. p. 188.
72. » lepidus *Thomas*. p. 188.
73. » Forbesi *Thomas*. p. 188.
74. » lamia *Thomas*. p. 189.
75. Conilurus papuanus *Ramsay*. p. 189.

MARSUPIALIA.

76. Phalanger maculatus *E. Geoffroy*. p. 189.
77. » orientalis *Pallas*. p. 190.
78. » vestitus *A. Milne Edwards*. p. 190.
79. » carmelitae *Thomas*. p. 190.
80. » leucippus *Thomas*. p. 191.
81. Pseudochirus Schlegelii *Jentink*. p. 191.
82. » Forbesi *Thomas*. p. 191.
83. » Corinnae *Thomas*. p. 192.
84. » Albertisii *Peters*. p. 192.
85. » Albertisii coronatus *Thomas*. p. 192.
86. » cupreus *Thomas*. p. 193.
87. » canescens gyrator *Thomas*. p. 193.
88. » avarus *Thomas*. p. 194.
89. Dactylopsila trivirgata *Gray*. p. 194.
90. » Albertisii *Peters et Doria*. p. 194.
91. » palpator *A. Milne Edwards*. p. 195.
92. Petaurus breviceps papuanus *Thomas*. p. 195.
93. Dromicia caudata *A. Milne Edwards*. p. 196.

94. Distoechurus pennatus *Peters*. p. 196.
95. Acrobates pulchellus *Rothschild*. p. 197.
96. Halmaturus agilis *Gould*. p. 197.
97. Thylogale Browni *Ramsay*. p. 197.
98. Dorcopsis Mülleri *Schlegel*. p. 198.
99. » luctuosa *d'Albertis*. p. 198.
100. » Hageni *Heller*. p. 198.
101. » Macleayi *Mikl.-Macleay*. p. 199.
102. » rufolateralis *Rothschild*. p. 199.
103. » aurantiacus *Rothschild*. p. 199.
104. Dendrolagus ursinus *Müller*. p. 200.
105. » inustus *Müller*. p. 200.
106. » dorianus *Ramsay*. p. 200.
107. » maximus *Rothschild*. p. 201.
108. Perameles moresbyensis *Ramsay*. p. 201.
109. » doreyana *Quoy et Gaimard*. p. 201.
110. » Cockerelli *Ramsay*. p. 202.
111. » raffrayana *A. Milne Edwards*. p. 202.
112. » Broadbenti *Ramsay*. p. 203.
113. » longicaudata *Peters et Doria*. p. 203.
114. » ornata *Thomas*. p. 203.
115. Dasyurus albopunctatus *Schlegel*. p. 204.
116. » daemonellus *Thomas*. p. 204.
117. Phascogale melas *Müller et Schlegel*. p. 205.
118. » Wallacei *Gray*. p. 205.
119. » dorsalis *Peters et Doria*. p. 205.
120. » Doriae *Thomas*. p. 206.
121. » longicaudata *Schlegel*. p. 206.
122. » melanura *Thomas*. p. 206.

MONOTREMATA.

123. Tachyglossus Lawesii *Thomas*. p. 207.
124. Proechidna Bruynii *Peters et Doria*. p. 207.
125. » nigro-aculeata *Rothschild*. p. 208.

PACHYDERMATA.

126. Sus papuensis *Lesson*. p. 208.
127. » niger *Finsch*. p. 208.